NHMFL

Forensic Science Activity

Newsletter Date

Forensic Science

Special points of interest:

- **Briefly highlight your point of interest here.**
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Inside this issue:

Lead Story Headline

This story can fit 175-225 words.

The purpose of a newsletter is to provide specialized information to a targeted audience. Newsletters can be a great way to market your product or service, and also create credibility and build your organization's identity among peers, members, employees, or vendors.

First, determine the audience of the newsletter. This could be anyone who might benefit from the information it contains, for example, employees or people interested in purchasing a product or requesting your service.

You can compile a mailing list from business reply cards, customer information sheets, business cards collected at trade shows, or membership lists. You might consider purchasing a mailing list from a company.

If you explore the Publisher catalog, you will find many publications that match the style of your newsletter.

Next, establish how much time and money you can spend on your newsletter. These factors will help determine how frequently you publish the newsletter and its length. It's recommended that you publish your newsletter at least quarterly so that it's considered a consistent source of information. Your customers or employees will look forward to its arrival.

Caption describing picture or graphic.

Secondary Story Headline

This story can fit 75-125 words.

Your headline is an important part of the newsletter and should be considered carefully.

In a few words, it should accurately represent the contents of the story and draw readers into the story. Develop the headline before you write the story. This way, the headline will help you keep the story focused.

Examples of possible headlines include Product Wins Industry Award, New Product Can Save You Time!, Membership Drive Exceeds Goals, and New Office Opens Near You.

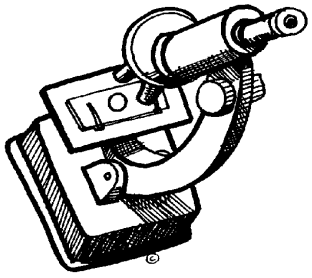
Forensic Science Activity

Evidence Processing Directions

This activity is centered around processing the evidence collected at a crime scene. There are five types of evidence: fingerprint, bite mark, handwriting, fracture mark, and written statements. Evidence that is processed by the student groups must be interpreted in a way that allows the evidence to be logically put into a narrative explanation for the crime's events.

Stress with your students the importance of logical and reasonable interpretations for the story their evidence is trying to tell. They may not get a definitive answer as to who committed the crime, but they will surely be able to build a case against one individual that is backed up by their interpretation of the evidence.

When groups have finished processing the evidence, they should present their findings and recommendations to the "GRAND JURY" (the rest of the class) to see if they agree that there is enough evidence to try the accused.



Evidence interpretation has changed dramatically as

*Remember, the evidence **may not** point directly to one person in a clear, undeniable way.*

Fingerprint Analysis

The directions for the fingerprint analysis are farly simple. Student groups are to be given a sheet containing a partial fingerprint (found at the crime scene) and 4 other fingerprints.

The partial print was found on the inside doorknob of the locked front door. It was found as the top most print on the knob. Using a magnifying glass, student groups are to determine who left the partial print from the scene.

There are 2 or 3 prints that appear, at first glance, to be similar to each other. Careful observations will lead students to choose a suspect print that best matches the partial.

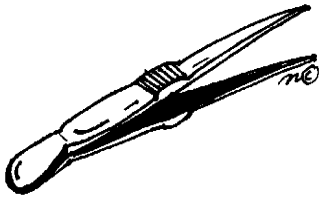
Students are required to write down 3 reasons that link the partial to the chosen suspect fingerprint. If a student group presents a reason that you find issue with, ask them if they feel that reason would be accepted by a jury. If they answer 'no', challenge them to try again.

Bite Mark Analysis

A person's bite mark is as unique as a person's fingerprint. In fact, one of the most important pieces of evidence in the conviction of serial killer Ted Bundy was a cast of a bite he had left on a victim.

The processing directions for the bite mark are very similar to the fingerprints. Use a magnifying glass to determine which suspect left, or appears to have left, a bite mark on the forearm of the victim. There are 2 or 3 bites that appear, at first glance, to be similar to each other. Careful observations will lead students to choose a suspect bite that best matches the bite from the victim.

Students are required to write down 3 reasons that link the suspect bite to the crime scene bite. If a student group presents a reason that you find issue with, ask them if they feel that reason would be accepted by a jury. If they answer 'no', challenge them to try again.



Evidence collection in careful, organized way is one of the most important tasks of a crime scene technician.

Handwriting Analysis

The handwriting analysis section contains the most challenging directions. Students are to choose and use 2 methods (from the 3 given) for determining who had signed the victim's signature. A sheet containing the check signature and the 4 suspect writing samples is in the case folder.

Students are to choose 2 of the three methods described as follows:

1. tops of letters: Use a piece of tracing paper to make a mark on all of the high points of every letter in the original signature. Connect the dots on the tracing paper. Put the newly created line on top of the other suspect signatures. See which one matches up the best

2. bottoms of letters: The same as the tops, but marks are made on all of the bottoms of each letter. Compare the line for the original to all suspect signatures.

3. letter slants: Put the tracing paper on the original check signature. Draw a slanted line through the center of each letter, so that the slanted line has the same slant as each letter. Check against the suspect signatures.

No one suspect signature will match perfectly with the original, so the suspect signature with the closest match between 2 different methods is most likely the guilty party.

Technicians interpret the story the evidence tells, they do NOT manipulate the evidence to fit a pre-determined

Fracture Mark Analysis

When many items are broken, the pieces that remain bear fracture marks on their ends that can be used to match two original pieces back together.

In our crime, the guilty party tore a match out of a book and, for some unknown reason, burned it in the victim's apartment. Each victim was found with either a matchbook on their person or in their home. All matchbooks had at least one match torn from them.

Using the magnifying glasses (or dissecting microscopes), students are to visually examine each matchbook to determine which book held the crime scene match.

Each torn match end(from the suspect books) must be sketched, as well as the end from the crime scene match.

From their drawings, students should be able to identify which matchbook originally held the burnt match.

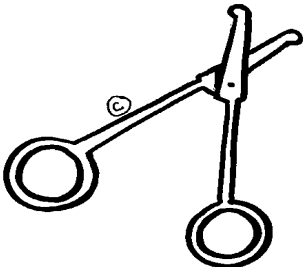
Logical reasoning is as important of a CSI tool as any piece of physical hardware.

Teaching Points

The focus on this activity is to get students to reach a defensible conclusion, based on a logical interpretation of evidence.

While there is a "right answer" for the entire activity, the focus should be on how well student groups explain the conclusions they reached after their own processing of the given evidence.

If the class (grand jury) agrees with the interpretations of the student group, the case will go to trial. If not, groups will have to re-evaluate the evidence the grand jury had difficulty accepting.



CSI technicians are often called to testify before a judge, so defensible data is a must!

Teachers, keep in mind during this activity that the evidence should be used to lead investigators to a logical interpretation of the events. While it has already been mentioned, it bears repeating: there are correct answers to the individual pieces of evidence; HOWEVER there are many "correct" ways to have that evidence tell a defensible story. The focus of the activity is two fold: accurately process the evidence collected from the crime AND logically put that evidence into a narrative that fits all of the available evidence.

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"Answer" Key

While there is no absolutely definitive answer for what occured just prior to Will's death, the evidence was made to produce the following results:

Fingerprint = partial from crime scene matches suspect Anthony Washington

Handwriting = check signature matches Cedric Betts

Fracture Marks = burnt crime scene match came from matchbook of Anthony Washington

Bite marks = suspect bite mark matches impression of Cedric Betts

Student explanations should include the idea that Cedric Betts is most likely responsible for the suspect's murder, and that Anthony Washington was somehow involved. Specifics of those events are very much left to the logical interpretation of the student investigators.

Evidence can tell a lot about what happened at a crime scene, but not always the whole story.